Date: Fri, 21 Oct 94 17:58:49 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: List
Subject: Info-Hams Digest V94 #1142
To: Info-Hams

Info-Hams Digest Fri, 21 Oct 94 Volume 94 : Issue 1142

Today's Topics:

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 21 Oct 94 20:51:11 GMT
From: magliaco@pilot.njin.NET (John Magliacane)
Subject: * SpaceNews 24-Oct-94 *

SB NEWS @ AMSAT $SPC1024
* SpaceNews 24-Oct-94 *

BID: $SPC1024

SpaceNews

MONDAY OCTOBER 24, 1994

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is published every week and is made available for unlimited free distribution.

* AO-21/RS-14 GOES SILENT *

A "Total Shutdown" of the amateur radio payload AO-21 (including the CW-beacon on 145.818 MHz) on the main spacecraft INFORMATOR 1 occured between 94-10-12 15:00 UTC and 94-10-13 11:42 UTC. Any telemetry captured during this interval would be very helpful in trying to determine the reason for the shut down. Telemetry reports should be directed to the AO-21 spacecraft controllers:

- via PACKET to Robert: DD4YR @DB0AAB.#BAY.DEU.EU
- or via INTERNET to Peter : db2os@amsat.org

Many thanks in advance.

73s Peter, DB2OS
Gerhard, DG2CV
Robert, DD4YR

* KEPLERIAN DATA VIA E-MAIL *

As a service to the AMSAT satellite community, The Dallas Remote Imaging Group is providing an automated email response service to request satellite keplerian elements via email request.

To obtain the latest satellite keplerian elements, simply send an email note to the following addresses for the specific set of satellites that you would like. New e-mail address services include:

elements@drig.com
amsatkep@drig.com
intelsat@drig.com
weathkep@drig.com
shuttle@drig.com
info@drig.com

An email message to elements@drig.com generates a response with NASA 2-line elements for the week, email to amsatkep@drig.com generates a response with AMSAT style explicit keplerian elements, email to intelsat@drig.com generates the Ted Molczan Intelligence sat keplerian elements, email to weathkep@drig.com generates the listing f weather/imaging satellite keplerians, and email to shuttle@drig.com generates the latest STS-XX shuttle mission keps during active STS missions only.

To use this service, simply address your email to the above addresses, and the latest of the keplerians will be forwarded to your email address. The body of the letter can have anything in it.

The 56 kbps line will be installed at DRIG in early December, and at that time the software will be modified for telnet and ftp capability.

[Info via Jeff Wallach, N5ITU, of the Dallas Remote Imaging Group]

* VE3ONT EME NEWS *

As previously announced, the Toronto VHF Society's proposed EME operation in late October has been cancelled due to a newly scheduled international supernova observation set for the same time period.

We have been advised by the Institute foe Space and Terrestrial Science (ISTS) that they will do everything possible to ensure availability of the 46 meter antenna for the November 26-27 contest weekend. VE3ONT will operate on both of these days on 144.100 MHz (listening 144.100 - 144.110).

In addition, ISTS has informed us that the antenna is currently available to us on the two days prior to the November contest weekend. VE3ONT *may* operate on Thursday Nov 24 and Friday Nov 25 on 50 MHz, 1296 MHz, and/or 10 GHz. These plans are tentative and subject to change. Announcements will be made on the EME nets, packet BBS, and Internet when the details are finalized.

Everyone should be reminded that dish availability is always subject to last-minute changes. As non-paying users at the Space Complex, we are obliged to bow to commercial operations. Please also keep in mind that winter weather at the end of Novemebr can be very unpredictable and may have a great effect on our success.

Stay tuned to the nets for up-to-date announcements or call Peter Shilton (VE3VD) at (905) 774-8766 evenings or Dennis Mungham (VE3ASO/VA3SO) at (613) 998-7330 days.

[Info via Michael Owen W9IP]

* THANKS! *
===========
Thanks to all those who sent messages of appreciation to SpaceNews,
especially:

             IK1QLD   N2JUX   VE3WBZ   KE6KQE   ON6JC/LU

* FEEDBACK/INPUT WELCOMED *
==========================
Mail to SpaceNews should be directed to the editor (John, KD2BD) via any
of the following paths:

FAX   : 1-908-747-7107
PACKET   : KD2BD @ N2KZH.NJ.USA.NA
INTERNET : kd2bd@ka2qhd.de.com -or- kd2bd@amsat.org
SATELLITE : AMSAT-OSCAR-16, LUSAT-OSCAR-19

MAIL   : John A. Magliacane, KD2BD
            Department of Engineering and Technology
            Advanced Technology Center
            Brookdale Community College
            Lincroft, New Jersey 07738
    U.S.A.

       <<=- SpaceNews: The first amateur newsletter read in space! -=>>

/EX

--
John A. Magliacane, KD2BD   * /\/\ * Voice   : 1-908-224-2948
Advanced Technology Center |/\/\/\| Packet : KD2BD @ N2KZH.NJ.USA.NA
Brookdale Community College |\/\/\/| Internet: magliaco@pilot.njin.net
Lincroft, NJ 07738   * \/\/ * Morse   : -.- -.. ..--- -... -..

Date: 21 Oct 1994 18:29:49 GMT
From: rshepard@interaccess.com (Robert Shepard)
Subject: 5/6 tones code for pagers?

most of the frequencies used for 5/6 tone paging can be found in just
about any Motorola 5/6 tone pager's manual. Actual cap code can vary
from service to service. But if you are simply looking for the tones
in order to activate a unit, see the book.

I know there are standard Cap Code plans for 2-tone paging, but I
don't know if there is, or ever was one for 5/6 tone.

Clement Vaillancourt
(vaillan@ireq.hydro.qc.ca) wrote:
: Where can I find the specifications for the 5/6 tones code used to
: activate pagers....?

: Thank you very much, 73 de Clement, VE2HQJ
: ---
:   Clement Vaillancourt,   Institut de Recherche d'Hydro-Quebec
:   Analyste,   Varennes, P. Quebec, Canada, J3X 1S1
:   Informatique scientifique   Tel:+1 514 652 8238 Fax:+1 514 652 8309
:   Int: vaillan@ireq.hydro.qc.ca   Radio-Amateur: VE2HQJ@VE2CRL.#MTL.PQ.CAN.NA

Date: 21 Oct 1994 05:46:52 -0700
From: dmiller@crl.com (Donald J. Miller)
Subject: 824-851 MHz??

dbarton@unix.cc.emory.edu wrote:
: Just out of curiosity, what is located in the 824-851 MHz range? I
: notice that most scanners do not cover this range. My guess is TV, but I
: am willing to be proved wrong. Thanks in advance...

The cellular radio mobile transmit range is 824 to 849 MHz. The cellular
base stations transmit from 869 to 894 MHz. A few years ago, it became
illegal to sell scanners that cover these ranges. More recently, it
became illegal to sell scanners that are *easily modifyable* to cover
these ranges.

I don't know whether it is legal or not to sell frequency block
converters that would simply move these bands to where scanners
could pick them up. Does anyone know?

Later,

--

Don Miller   My opinions are my own!
dmiller@crl.com

Date: Fri, 21 Oct 1994 12:51:14 EDT
From: w1aw@arrl.org
Subject: ARLP043 Propagation de KT7H

SB PROP @ ARL $ARLP043
ARLP043 Propagation de KT7H

ZCZC AP57
QST de W1AW
Propagation Forecast Bulletin 43 ARLP043
 From Tad Cook, KT7H
Seattle, WA October 21, 1994
To all radio amateurs

SB PROP ARL ARLP043
ARLP043 Propagation de KT7H

Solar activity was up this week, and the K and A indices were quite low. Tuesday and Wednesday had many three hour periods when the K index was zero, which means stable conditions with low absorption. Coupled with solar flux over 90, we have had better conditions compared with what we have experienced over recent weeks.

This will change however, because of a recent solar flare. A disturbance generated by this flare is expected to hit this weekend, on October 22 or 23, which should be reflected in higher A and K indices. Check WWV for updates. Every three hours there is a new K index, and anything above three means degraded conditions with higher absorption. Since the K index is not linear, each change of one point is very significant. A K index of 4 is disturbed, and 5 is truly awful.

Another disturbance is expected at the end of the month, due to a recurring coronal hole. Look for the worst around October 30 and 31, with poor conditions probably lasting through the first few days of November. The solar flux should decline down to around 80 around November 5 and 6, and then rise back to 90 before the middle of the month.

Sunspot Numbers for October 13 through 19 were 69, 88, 98, 83, 68, 78 and 93, with a mean of 73. 10.7 cm flux was 93.1, 92.6, 92.7, 91.7, 91.6, 90.5 and 90.7, with a mean of 91.8.

The path projection for this week is from Portland, Oregon to Pitcairn Island.

80 meters looks good from 0300z to 1330z, and 40 meters from 0230z to 1400z. Check 30 meters from 0130z to 1500z. 20 meters should be

open from 1500z to 1800z and again from 2300z to 0330z. There may
be openings between those times, but with weaker signals. 17 meters
looks good from 1600z to 0200z, and 15 meters from 1700z to 0030z.
12 meters should be open from 1900z to 2300z. 10 meters should be
open on many days from 2000z to 2200z.
NNNN
/EX

Date: Fri, 21 Oct 1994 19:05:18 GMT
From: jeffrey@kahuna.tmc.edu (Jeffrey Herman)
Subject: ARRL to change "Silent Keys" label in QST?

In article <782683740snz@g4kfk.demon.co.uk> Mike@g4kfk.demon.co.uk writes:
>Hi Michael,
>
>> Clearly, we need some "Truth in Advertising". These hams can't be
>> silent "keys", because most of them were probably too lazy to touch
>> a key (or even know what a key is, for that matter...).
>
>What a terribly insensitive attitude. Never speak ill of the dead.
>
>> -- Ted Kennedy has killed more people with his car
>> -- than I have with my gun.
>
>Did you see his new bumper sticker?: 'My other car is underwater'

I love it! Thanks for the laugh!

Jeff NH6IL

>
>73
>Mike
>G4KFK - 25wpm on a good day!
>
>**
>* The CQ Centre BBS * 01753 595468 and 01753 593524 * Fidonet 2:252/320 *
>* Hundreds of Megabytes of Quality Software for Radio Amateurs and SWLs *
>* Tel 01753 582085 * Fax 01753 592726 * Internet mike@g4kfk.demon.co.uk *
>**

Date: 21 Oct 1994 12:59:11 GMT
From: md@pstc3.pstc.brown.edu (Michael P. Deignan)

Subject: Intl call sign servers/CDs

In article <3884p8$8m3@rigel.infinet.com>,
   wvanho@infinet.com (W. E. Van Horne) writes:

|> I don't know of any International "Call Book" CD, and I doubt that any
|> such listing will be put on an open server because of the cost and labor
|> required to compile it. But individual countries may do so.

Buckmaster has international calls on their CDROM. Its by no means complete,
but it's a good start. The only problem is that the file is encrypted,
and the lookup program is compiled for DOS with no source, so even if you
buy the CDROM, you can't use it on a Unix machine or some-such machine
for purposes of putting a "server" up.

MD

Date: 20 Oct 1994 21:12:14 GMT
From: mjsilva@ix.netcom.com (michael silva)
Subject: Is this legal?

In <Pine.3.87.9410200629.B64565-0100000@fep01.rfc.comm.harris.com>
slg@rfc.COMm.harris.COM (Steven L Goldstein) writes:

>
>I live in New York State and my brother-in-law is presently living in
>Colombia, South America. He's not a ham but has a short wave radio. Would
>it be legal for me to make a one-way transmission intended for him to
>hear, or are amateur radio transmissions only legal if they're 2-way w/
>other hams?
>
Correct on the second count. (There are certian one-way transmissions allowed
but nothing like what you propose.)

Mike, KK6GM

Date: 21 Oct 94 21:08:30 GMT
From: pmarsh@metro.mccneb.EDU (Paul Marsh)
Subject: Long story about railroad telegrapher

I have a long reminiscence by a railroad telegrapher (one person's
experience, written in 1940). Anyone interested, send a note requesting
it to me (directly, not to the list).

Paul Marsh   N0ZAU   pmarsh@metro.mccneb.edu

Date: 20 Oct 1994 04:05:54 GMT
From: lees@andrews.edu (Steve C. Lee)
Subject: Looking for local hams

hello everyone..

i was wondering if anyone knew of any hams in the oklahoma city,
oklahoma area.

if so.. please let me know.. i'm looking for an elmer or just someone to
ask occasional questions in the area..

thanks alot!!

steve

Date: 21 Oct 1994 18:31:37 GMT
From: caralt@gaig.upc.es (Jordi Caralt Barba)
Subject: More Satellite tracking for amateurs

I am gratefully surprised by all the interest showed through E-mail by this project. In response to all the people that required more information I would like to extend myself a bit further over the Static Satellite Tracking Device.
The system consists in a planar array of 19 elements. The disposition is crucial because of the frequency band I'm considering: UHF. By crucial I mean that a minute change in any of the describing factors of the array could ruin the beam shape and thus its directivity. This consideration is a hard limiter because it considerabily reduces the number of possible configurations. After a long period of tests and computer simulation I have decided that the best configuration is hexagonal, with all the elements spaced about half wavelength (this "about" is specially tricky) filling the hexagon in a triangular lattice. Many other configurations were considered (circular, square, linear, etc) but none proved to be so efficient in terms of directivity versus beam direction.
The next step is the control of the beam. We must take into account that most amateur satellites cross the sky in few minutes. Thus, an easy and fast control system must be used. Because I wanted the array to be totally static, the only way to move the beam is to gradually change the elements phase, as widely known. Using a small algorism I can find the adequate phase for each element and thus, direct the beam towards the place

desired (that is, where the satellite is).
Another important decision to take is what radiating elements should
be considered. As you
may well know, most satellites transmit with circular polarisation: that is
because at this
frequencies is not possible to use linear polarisation because of Faraday's
Rotation. So, we must find an element that, radiating together with the
rest of the elements of the array, the transmitting-receiving electric
field be circular polarised (the sense of rotation CW or CCW is also to
be considered). I have carried out several computer simulations because
I wanted to study the change in polarisation of the electro-magnetic field
due too the changes of direction. You all know about this: imagine a
radiating loop placed in the XY plane. The polarisation in the z-axis
(elevation=90 degrees) is circular (CW or CCW depending on the sense of the
feeding current). But as you decrease elevation, polarisation is no longer
circular but elliptic. So, if the satellite is transmitting circular we get
signal loss, depending on the excentricity of the ellipse. I've concluded
that the best option is to use crossed half wave dipoles fed by equal current
amplitude but a phase shift of 90 degrees to obtain circular polarisation.
Computer simulation showed that we can get almost 16 dB of directivity (gain)
at elevation angles of 30 degrees. This means that the array can track
satellites in a range of 120 degrees, which I thing is quite remarkable.
If we can accept a loss of 3 dB the range increases to 140 degrees.
At present, I'm working on the design of the RF part. Things to solve are
(suggestions will be welcome):

1. Normally arrays have much noise problems than other devices. Fortunatelly
I found an article containing some solutions, but eventhough we must use a
pre-amp for each element. This amplifier has to have a good noise figure
(and has to be cheap too!). I've been searching quite thoroughly but I
can't find a suitable transistor (Phillips, Siemens, Advantek, etc).

2. The usage of a pre-amp implies a switching device that differenciates
th transmitting and the receiving. I would like to use an electronic device
if possible, but a mechanic one should prove fine provided is easy to switch.

3. Phase shifters are made of lines of different lengths. The appropiate one
is selected by diodes, depending of the phase the radiating element has to
have. Because we are working with RF signals, the parasite condenser must be
very low. PIN diodes have very low values, but are difficult to find.

I would also thank anyboody that could give information on:

4. Is there any phase shifter in chip?
5. Is there anybody who knows something about high directivity planar arrays?
   Am I the first to attempt doing such a device?
6. If you are an Amateur Satellite operator, I'll be delighted to know
   something about the most usual problems you have to cope with.

Yours faithfully

Date: 21 Oct 94 11:32:38 -0500
From: tiu11@juncol.juniata.edu
Subject: PK-900

Date: 21 Oct 94 16:11:23 EST
From: clmorgan@mumr2.mid.muohio.edu (Carl Morgan)
Subject: Which is harder ADVANCED OR EXTRA TEST?

In article <1994Oct19.112020.11689@ke4zv.atl.ga.us>, gary@ke4zv.atl.ga.us (Gary Coffman) writes:
> In article <1994Oct18.173158.21615@rsg1.er.usgs.gov> junger@rsg1.er.usgs.gov (John Unger) writes:
>>The Advanced written test is probably harder to study for because you have
>>to learn more electronic theory rather than memorize who can launch
>>satellites... However, neither of these present-day written exams is
>>nearly as difficult as the General written exam that I took 18 years ago;
>>you had to draw schematics for common circuits, and the questions and
>>answers weren't "canned" like today's exams.
>
> What? That's 1976. I don't know when the FCC changed from blue books
> to standardized multiple choice exams, but I *know* that it was prior
> to 1964 when I took my General exam. I recall the OTs telling me how
> much easier I had it than they did when *they* were licensed. The
> First Class Radiotelephone exam I took in 1963 did still use blue
> books. However, it was easier than the amateur exam.
>
> Gary
>
> --
> Gary Coffman KE4ZV | You make it, | gatech!wa4mei!ke4zv!gary
> Destructive Testing Systems | we break it. | emory!kd4nc!ke4zv!gary
> 534 Shannon Way | Guaranteed! | gary@ke4zv.atl.ga.us
> Lawrenceville, GA 30244 | |

As I remember, both the ham and commercial exams were of multiple-choice design back in 1958/59.

Yes, they required hand-drawn diagrams as well as a few essay answers to "what

if" kinds of questions. Most, as I recall, were multiple-choice type.

As for having "published" question pools available, I seem to recall a "License Manual" that was readily available. Although it may not have contained verbatum questions-n-answers, the samples therein were awfully close to the "real thing". Clearly good for study (or memorization).

73 >< Carl
K8NHE

Date: Fri, 21 Oct 1994 15:22:44 GMT
From: serafin@spdc.ti.com (Mike Serafin)

References<781500089.59snx@agape.sol.net> <R47U6q9.leevankoten@delphi.com>, <phb.782747783@melpar>
Subject: Re: CW Learning: Going slow. :(

Paul H. Bock (phb@syseng1.melpar.esys.com) wrote:
: not work for others. However, it is worth trying the different "tricks"
: you hear about just to find out what will work for you and what won't.
 [snip]
: aircraft being ferried back to the U.S. at the end of the war. They
: were traind by being taught "When you hear this sound (code character)
: huit this key (on a typewriter)." As the story was related to me, the
: natives had no idea what the sounds or the symbols on the keys meant,
: but they had no trouble copying.

:   As you move above 20 WPM it really becomes a *language* learning
: process, because it high speeds you no longer can pick out individual
: characters. So, your learning mechanism is going to be different.

I just picked up a set of tapes at Tucker's that uses this kind of teaching technique. They are the Jerry Ziliak Radio School tapes. Unlike most basic learning tapes, he does not start out with 5 wpm code. Characters are sent at 21wpm using the Farnsworth method. One thing very different from any program or tape that I've listen to so far, is that when presenting the characters for the first time he leaves very little space between. You are encouraged to say the character as soon as the last dit or dah comes through. The characters are sent 10-20 times (I haven't had time to count yet). It makes you listen to the SOUND of the pattern and associate that immediately with the letter, rather than giving you time to think about the pattern, then translate.

The first 2 hours of the tapes are learning the code at the 21 wpm character speed. The last 2.5 hours are practice sessions broken up thusly:
short 3wpm/long 5wpm/short 7wpm(the long/short representing the length of that

particular speed segment), then 5/7/9 and continuing like this until 19/21/23. I don't remember the exact lesson breakdown and that stuff is at home, but I can post/email the details if anyone is interested.

So far it seems like a really good system. I had started studying the code a couple of weeks ago using Morse Academy, but this seems to be a much better way to learn all the characters and get your speed up.

The 3 tape set is 4.5 hours long and cost 19.95. He also has a set of tapes to learn commonly sent words as single patterns, along with single tapes for 13 and 20 wpm, and some theory tapes. At least that what Tucker stocks. The tapes are also available by mail.

I am not an any way affiliated with Ziliak, just a satisfied customer.

Mike
KC5GRW

Date: Fri, 21 Oct 1994 18:58:35 GMT
From: dmunroe@vcd.hp.com (Approach maximum loads with caution)

References<18OCT199413225024@elroy.uh.edu> <CxxEvJ.H35@mail.auburn.edu>, <linleyCxyJG3.AxI@netcom.com>
Subject: Re: Callsigns.

Bruce James Robert Linley <linley@netcom.com> wrote:

>Even the number in the callsign is becoming meaningless. Here in CA I
>know a couple of N2XXX and KB4XXX hams. Soon, I'll be moving to 7-land
>(NV or AZ), but I don't want to give up my callsign.

Maybe it's just me, but I like doping a region with a few impurities (ObTransistorJoke); at least it's a good conversation starter.

Most of the new calls I see are KA-KD. Are any new N, A, or W calls being issued?

-Dave

,---.
| / |
| Dave Munroe   /   xx7xxx   Tech+, just another QRP DX addict |
| dmunroe@vcd.hp.com   / |
| /   (awaiting license) |
`---'

Date: Fri, 21 Oct 1994 15:31:59 GMT
From: serafin@spdc.ti.com (Mike Serafin)

References<199410200158.SAA14274@ucsd.edu> <199410200859.BAA04216@ucsd.edu>,
<388br9$3p9@narnia.ccs.neu.edu>
Subject: Re: Code Programs/Sound Blasters

Scott Ehrlich (scotte@ccs.neu.edu) wrote:
: In article <199410200859.BAA04216@ucsd.edu>,
: Tim Wright KD4OVM <t.wright@msuacad.morehead-st.EDU> wrote:
: >Anybody know of a Code Program that uses a sound blaster system?
: >If you do and it is available FTP E-mail me the address Please.
: >thanks

: Although I don't have access to a SB system, Super Morse 4.10 claims SB
: capabilities.

I've e-mailed Tim with my comments already about SB support in SM, but I thought I'd say something here. I tried getting SM 4.1 to work with my SB and did not have any luck. Selected the SB option in the set-up, but it still directed sound to the PC speaker, yechh. Didn't look into it very far, as I had also just DL'd the current version of Morse Academy and it works great with the SB. Besides, I think I like MA's presentation and bit better than SM's.

JMHO.

Mike
KC5GRW

Date: Fri, 21 Oct 1994 13:30:05 GMT
From: gary@ke4zv.atl.ga.us (Gary Coffman)

References<Cxy771.FqB@umassd.edu> <1994Oct20.112116.16894@ke4zv.atl.ga.us>,
<Cy01Hw.Ho6@news.Hawaii.Edu>
Reply-To: gary@ke4zv.atl.ga.us (Gary Coffman)
Subject: Re: WTB: Radar gun...

In article <Cy01Hw.Ho6@news.Hawaii.Edu> jeffrey@math.hawaii.edu writes:
>gary@ke4zv.atl.ga.us (Gary Coffman) writes:
>
>> The FAA windshear measuring radar is also *not* laser. It's
>>UHF RF at 449.0 MHz (right in the amateur 70 cm band's repeater input
>>segment, not pretty).

>
>This seems to be an incredibly dangerous choice of a frequency.

Tell me about it, it's certainly dangerous to my repeater.

>If a windshear is detected I believe a warning is automatically
>transmitted to nearby aircraft, correct? Is it possible
>for an HT to confuse the radar and trigger the system?

No, these systems do not automatically transmit warnings. That's
a different short range system used on airport property. These
big honkers run megawatts ERP firing straight up from "rural"
sites. They are used to do atmospheric profiles looking for
conditions that promote windshear.

Gary
--

Gary Coffman KE4ZV | You make it, | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | we break it. | emory!kd4nc!ke4zv!gary
534 Shannon Way | Guaranteed! | gary@ke4zv.atl.ga.us
Lawrenceville, GA 30244 | |

End of Info-Hams Digest V94 #1142
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